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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)		
	10/564,726	GALAND ET AL.		
Office Action Summary	Examiner	Art Unit		
	Imad Hussain	4117		
The MAILING DATE of this communication app Period for Reply	ears on the cover sheet with the c	orrespondence address		
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA  - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory period w  - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tim vill apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE	N. nely filed the mailing date of this communication. D (35 U.S.C. § 133).		
Status				
Responsive to communication(s) filed on 1/17/2  2a)    This action is <b>FINAL</b> .    2b)    This  3)    Since this application is in condition for allowar closed in accordance with the practice under E	action is non-final. nce except for formal matters, pro			
Disposition of Claims				
4) Claim(s) 1-16 is/are pending in the application.  4a) Of the above claim(s) is/are withdrav  5) Claim(s) is/are allowed.  6) Claim(s) 1-14 and 16 is/are rejected.  7) Claim(s) 15 is/are objected to.  8) Claim(s) are subject to restriction and/or  Application Papers  9) The specification is objected to by the Examine  10) The drawing(s) filed on is/are: a) access applicant may not request that any objection to the orection and request that any objection and request that any o	vn from consideration.  r election requirement.  r.  epted or b)  objected to by the Edrawing(s) be held in abeyance. See	e 37 CFR 1.85(a).		
11)☐ The oath or declaration is objected to by the Ex	aminer. Note the attached Office	Action or form PTO-152.		
Priority under 35 U.S.C. § 119				
<ul> <li>12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).</li> <li>a) All b) Some * c) None of:</li> <li>1. Certified copies of the priority documents have been received.</li> <li>2. Certified copies of the priority documents have been received in Application No</li> <li>3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> <li>* See the attached detailed Office action for a list of the certified copies not received.</li> </ul>				
Attachment(s)  1) Notice of References Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO/SB/08)  Paper No(s)/Mail Date 1/17/2006.	4)  Interview Summary Paper No(s)/Mail Da 5)  Notice of Informal P 6)  Other:	nte		

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### **DETAILED ACTION**

### **Priority**

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. PCT/FR/04/01695, filed on 06/30/2004.

#### Information Disclosure Statement

2. The information disclosure statement filed 01/17/2006 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. Namely, a copy of the "CORE JINI" reference has not been furnished to the office; as such, it has been crossed-out from the filed IDS.

## Specification

3. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.

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(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.

- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (I) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

The submitted specification does not adhere to the above guidelines in that it lacks section headings. Appropriate correction is required.

- 4. The disclosure is objected to because of the following informalities:
  - a. "Equipment" is a collective singular noun but is not treated as such [throughout document, e.g., specification page 1, line 9 recites "equipments"]. When a single item is being referred to, the standard English terminology of "piece of equipment" (or equivalent) should be used. When multiple items are being referred to, either of "equipment" or "pieces of equipment" (or equivalent) is acceptable.
  - b. An "impossible situation" is described as "arising" [specification page 1,line 8]. By definition, an impossible situation cannot occur.
  - c. Field SP1 is described as consisting of "six bits, each consisting of an alphanumeric character chosen from nine characters" and field SP2 is described as consisting of "58 bits, each consisting" of "a character selected from 36".

characters". By definition, a bit (binary digit) can encode only two possible values.

- d. The disclosure appears to be a literal translation into English from a foreign document and is replete with grammatical and idiomatic errors, as exemplified above. Appropriate correction is required.
- 5. 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are exemplified above.

## Claim Objections

- 6. Claims 1-16 are objected to because of the following informality: "equipment" is a collective singular noun but is not treated as such [e.g., claim 1 recites "equipments"]. When a single item is being referred to, the standard English terminology of "piece of equipment" should be used. When multiple items are being referred to, either of "equipment" or "pieces of equipment" is acceptable. Appropriate correction is required.
- 7. Claims 1-8 and 16 are objected to because of the following informality: claims must be in the form of an object of a sentence starting with "I (or we) claim," "The invention claimed is" (or the equivalent). For the claims listed, independent claims

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should begin with the preposition "A" and dependent claims with the preposition "The".

Appropriate correction is required.

- 8. Claim 1 is objected to because of the following informality: the claim refers to the communication equipment as "(Tk)", whereas the specification and the remainder of the claims refer to the communication equipment as "(Tj)". Appropriate correction is required.
- 9. Claim 3 is objected to because of the following informality: the term "said network layer protocol versions" lacks antecedent basis. Appropriate correction is required.
- 10. Claim 6 is objected to because of the following informality: the terms "said addresses", "said address data" and "said service data" lack antecedent basis. The terms are mentioned in claim 2, but claim 6 as written depends only on claim 1. Appropriate correction is required.
- 11. Claim 8 is objected to because of the following informality: "if its protocol version" should read "of its protocol version". Appropriate correction is required.
- 12. Claims 10 and 11 recite the limitation "equipment according to claim 9". This clause may be interpreted as either "communication equipment (Tj) according to claim 9" or "another equipment (Sk) according to claim 9". For the purposes of examination,

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the above-mentioned claimed clause will be interpreted as "communication equipment (Tj) according to claim 9".

- 13. Claims 12-16 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

  Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claims are written as being dependent on claim 9, which describes communication equipment (Tj) comprising management means (MG), but claims 12-16 do not further limit either the communication equipment or its management means.
- 14. Claims 13, 14 and 15 recite the limitation "equipment according to claim 12". This clause may be interpreted as either "service equipment (Sk) according to claim 12" or "communication equipment (Tj) according to claim 12". For the purposes of examination, the above-mentioned claimed clause will be interpreted as "service equipment (Sk) according to claim 12".
- 15. Claim 16 is objected to because of the following informality: the term "service equipments (Sk) according to claim 9" lacks antecedent basis. Appropriate correction is required.

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# Claim Rejections - 35 USC § 112

16. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

17. Claim 1 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "portions of said network (N)". A portion of a network as best understood by one of ordinary skill may be interpreted as a "segment" or subnet/subnetwork. However, according to the specs the only distinction provided is "In the case of a mixed (IPv4/IPv6) type communication equipment, the table stores the services provided by the IPv4 network portion and the services provided by the IPv6 network portion, for example" [Paragraph 0021]. However, a device's usage of IPv4 or IPv6 is irrelevant to a "network portion". For the purposes of examination, the abovementioned claimed clause will be interpreted as any portion, partition, area, region, segment, or subnet of a network.

## Claim Rejections - 35 USC § 101

18. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

18. Claim 16 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

In this case, computer-related inventions whether descriptive or functionally descriptive material are non-statutory categories when claimed as descriptive material per se (see Warmerdam, 33 F.3d at 1360 USPQ2d at 1759), falling under the "process" category (i.e. inventions at that consist of a series of steps or acts to be performed). See 35 U.S.C. 100(b) ("The term process means, art, or method, and includes a new of a known process, machine, manufacture, composition of matter or material"). However, the claim seems directed to a network does not seem to fall under the above-mentioned elegible patentable subject matters (see MPEP 2106).

### Claim Rejections - 35 USC § 103

- 19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 20. Claims 1, 9, 11-12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leonard Primak (US 2002/0095488 A1, hereafter Primak) in view of Jindal et al (US 6092178, hereafter Jindal).

Regarding claim 1, Primak teaches a *method of managing services offered by* communication equipments of an Internet Protocol communication network [Paragraph 5 Lines 6-9], the method characterized in that it consists in reporting [Primak: Paragraph 11 Lines 1-4]

to communication equipments [Primak: e.g. "any application program", Paragraph 8 Lines 4-8 and "local client", Paragraph 18 Line 4] services offered by the communication equipments [Primak: Paragraph 18 Lines 11-14].

Primak does not explicitly disclose that the communications equipment is situated in portions of said network that have service selection means and in portions of said network that have no service selection means and that the services are offered by the communications equipment that belongs to said network portions that do not have service selection means.

However, Jindal discloses a network topology with communications equipment (clients 120 and DNS server 100 of Fig. 1) situated in a portion of a network that has service selection means [Jindal: serving as service selection means] and communications equipment (110, 112, 114 of Fig. 1) situated in a portion of said network that has no server selection means [Jindal: serving as no selection service means] wherein services are offered by communications equipment that belongs to said network portion that does not have service selection means [Jindal: servers (110, 112, 114) **not** including DNS server (100), Figure 1].

Primak and Jindal are analogous art in the same field of endeavor as both cover directories for network services.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to utilize the network topology of Jindal for arranging computers on a network in the system of Primak. One of ordinary skill in the art would have been motivated to modify the system of Primak with the network topology of Jindal because in doing so, the system would allow for load-balancing of services [Jindal: Abstract].

Regarding claim 9, Primak and Jindal teach *communication equipment* [Primak: "any application program", Paragraph 8 Lines 4-8] *for an Internet Protocol communication network* [Primak: Paragraph 5 Lines 6-9], *characterized in that it comprises* 

management means [Primak: "dynamic directory", Paragraph 11] adapted,

firstly, in the event of receiving address data representing an address of another equipment belonging to a portion of said network that has no service selection means and offers a service and service data representing said offered service, to store said received address data in a memory in corresponding relationship to said service data received conjointly [Primak: "each local client connected to the network has a local copy of the dynamic directory which maps the service names to a list of IP addresses of service providers", Paragraph 18 Lines 1-8], and,

secondly, in the event of a request to access a selected service, to determine in said memory the address data representing the address of the equipment that offers said designated service, in order to set up a connection therewith [Primak: "the local client finds a network service by querying its local copy of the dynamic directory for a service name", Paragraph 20 Lines 1-8].

Regarding claim 11, Primak and Jindal teach that the communications equipment is selected from a group comprising at least servers [Primak: "participants", Paragraph 18

Lines 1-4; Jindal: servers (110, 112, 114), Figure 1] and communications terminals

[Primak: "local clients", Paragraph 18 Lines 1-4; Jindal: clients (120), Figure 1].

Regarding claim 12, Primak and Jindal teach Service equipment offering at least one service [Jindal: server (110), Figure 1] and belonging to a portion of an Internet Protocol communication network that has no service selection means [Jindal: servers (110, 112, 114) not including DNS server (100), Figure 1], the service equipment characterized in that

it comprises sender means ("the application program" [Primak: Paragraph 18] sending over a "reliable multicast protocol" "via the associated UDP port" [Primak: Paragraph 24 Lines 1-4] on a "presently available communication apparatus" [Primak: Paragraph 16]) adapted to broadcast messages [Primak: Paragraph 24 Lines 1-4] containing address data representing their own address [Primak: Paragraph 19 Lines 5-7] and service data representing said service offered [Primak: "service name", Paragraph 19 Lines 5-7] in said network to communication equipments according to claim 9.

Regarding claim 16, the claim comprises the same limitations as claims 9 and 12. The same rationale for rejection is applicable.

19. Claims 2 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Primak and Jindal as applied to claims 1 and 12 above further in view of Hideshi Sakurai et al (US 6,965,599, hereafter Sakurai).

Regarding claim 2, Primak and Jindal do not explicitly disclose that service data

representing that service is integrated into the address of said communication

equipments offering a service.

However, Sakurai teaches a method of "classifying send packets to be relayed to

said IP network, depending on the types of applications [service], to allocate a different

virtual IP address to each class" [Sakurai: Claim 10]. (Thereby a representation of the

offered service is integrated into the assigned virtual IP address).

Primak, Jindal and Sakurai are analogous art in the same field of endeavor as all

cover network access of services.

It would have been obvious to a person having ordinary skill in the art at the time

the invention was made to utilize the IP allocation method of Sakurai for service

classification in the system of Primak and Jindal. One of ordinary skill in the art would

have been motivated to modify the system of Primak and Jindal with the IP allocation

method of Sakurai because in doing so, the system would allow for a decrease in

system costs by lowering the number of required packet relay apparatus [Sakurai:

Column 1 Line 62-Column 2 Line 7].

Regarding claim 13, the claim comprises the limitations of claims 12 and 2. The same

rationale for rejection is applicable.

20. Claims 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Primak, Jindal and Sakurai as applied to claim 2 above further in view of Sumandra Majee et al (*IPv6 extension to RPC*, hereafter Majee).

Regarding claim 3, Primak, Jindal and Sakurai teach that said addresses containing the service data [Sakurai: Claim 10] are stored at least in said communication equipments [Primak: Paragraph 18 Lines 1-8] using said network layer protocol version [Sakurai: "IP", Claim 10].

Primak, Jindal and Sakurai do not explicitly disclose that multiple network layer protocol versions are used.

However, Majee teaches that a client can work with both versions 4 and 6 of the Internet Protocol (IPv4, IPv6) [Majee: Page 4 Section 4].

Primak, Jindal, Sakurai and Majee are analogous art in the same field of endeavor as all cover network access of services.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to utilize the dual versions of Majee for IPv4 and IPv6 support in the system of Primak, Jindal and Sakurai. One of ordinary skill in the art would have been motivated to modify the system of Primak, Jindal and Sakurai with the dual versions of Majee for IPv4 and IPv6 support because in doing so, the system would allow for applications to communicate with both IPv4 and IPv6 hosts [Majee: Page 4 Section 4].

Regarding claim 4, Primak, Jindal, Sakurai and Majee teach that said addresses containing address data representing addresses of equipments that offer a service and service data representing the service offered [Sakurai: Claim 10] and said address data is served in service and in service said service data [Drively Barrayan 10].

is stored in corresponding relationship to said service data [Primak: Paragraph 18 Lines

1-8].

Regarding claim 5, Primak, Jindal, Sakurai and Majee teach that, if one of said

communication equipments wishes to access a selected service, the address data

representing the address of the equipment offering said selected service is determined

in that communication equipment in order to set up a connection therewith [Primak:

Paragraph 20 Lines 1-8].

Regarding claim 6, Primak, Jindal, Sakurai and Majee teach that said addresses

containing said address data and said service data are broadcast in said network

[Primak: Paragraph 24 Lines 1-4].

Regarding claim 7, Primak, Jindal, Sakurai and Majee teach that said addresses are

broadcast in service messages [Primak: "update event message... advertising...

services", Paragraph 24 Lines 1-4].

21. Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Primak and Jindal as applied to claims 1 and 9 above further in view of Majee.

Regarding claim 8, Primak and Jindal do not explicitly disclose that in the presence of two equipments offering the same service in accordance with different network layer protocol versions, one of the two equipments is selected as a function if its protocol version, after which a packet is generated and sent to said selected equipment in the format of the selected version having a header containing at least the address data representing the destination address of the selected equipment.

However, Majee teaches that "the client should fall back to IPv4 (Internet Protocol version 4) in the event it fails to communicate with the remote server using IPv6 (Internet Protocol version 6)" [Majee: Page 4 Section 4]. Further, both IPv4 and IPv6 are known to include a destination address field.

Primak, Jindal and Majee are analogous art in the same field of endeavor as all cover network access of services.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to utilize the fall back mechanism of Majee for selection of IP versions in the system of Primak and Jindal. One of ordinary skill in the art would have been motivated to modify the system of Primak and Jindal with the fall back mechanism of Majee for selection of IP versions because in doing so, the system would allow for applications to be ignorant of the types of host with which they communicate [Majee: Page 4 Section 4].

22. Regarding claim 10, the claim comprises the limitations of claims 9 and 8. The same rationale for rejection is applicable.

23. Claims 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Primak, Jindal and Sakurai as applied to claim 13 above further in view of R. Hinden et al (*IP Version 6 Addressing Architecture*, hereafter Hinden).

Regarding claim 14, Primak, Jindal and Sakurai do not explicitly disclose that

in the presence of an IPv6 type protocol format, said sender means are adapted to place said address data and said service data in the last 64 bits of the 128 bits of the IPv6 format address field, the first 64 bits of said 128 bits being dedicated to identifying the network portion and to the route for contacting said service equipment whose address is defined in the last 64 bits.

However, Hinden discloses that the IPv6 addresses are arranged such that the first 64 (128-64) bits identify the network or subnetwork [Hinden: "subnet prefix", Page 8 Diagram 1 Section 2.5] while the later 64 bits identify the network equipment [Hinden: "interface ID", Page 8 Paragraph 4 Section 2.5.1]. Primak teaches that the addresses are IP addresses [Primak: Paragraph 18 Line 7], which adhere to the IP address format.

Primak, Jindal, Sakurai and Hinden are analogous art in the same field of endeavor as all cover transmission on IP networks.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to utilize the IPv6 address format of Hinden for formatting IP

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addresses in the system of Primak, Jindal and Sakurai. One of ordinary skill in the art would have been motivated to modify the system of Primak, Jindal and Sakurai with the IPv6 address format of Hinden for formatting IP addresses because in doing so, the system would follow the Internet Official Protocol Standards [Hinden: Page 1].

## Allowable Subject Matter

24. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

## Cited pertinent prior art

- 25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:
  - a. Sharma et al. US 7,136,382. (Describes a method of using IP addressing bits for QoS).
  - b. Onweller, Arthur. US 5,799,016. (Describes a method of encoding channel information in an IP address).
  - c. Deolaiker et al. US 2006/0095584 A1. (Describes a system of encoding network services information in IP addresses and broadcasting requests containing same).

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Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Imad Hussain whose telephone number is 571-270-

3628. The examiner can normally be reached on Monday through Thursday from 0730

to 1700.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Beatriz Prieto can be reached on 571-272-3902. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

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/IH/

Imad Hussain

Examiner

10/30/2007